84-546

CASE NO. .....

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In The

Supreme Court of the United States

October Term, 1984

McGILL INCORPORATED,

Petitioner,

v.

JOHN ZINK COMPANY,

Respondent.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

PETITION FOR WRIT OF CERTIORARI

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QUESTIONS PRESENTED

1. What protection, if any, do the patent statutes provide against a competitor who duplicates almost every element of a patented invention, but who avoids the literal terminology of the patent claim?

2. Should the Court reexamine the status of the doctrine of equivalents—the judicially-created rule permitting a finding of patent infringement notwithstanding the absence of literal invasion of the patent claim—last addressed in *Graver Tank Manufacturing Co. v. Linde Air Products Co.*, 339 U.S. 605 (1950)?

3. May a federal litigant be effectively denied the right to a jury trial through an appellate court's determination of disputed fact issues as if they were questions of law?

THE PARTIES

The parties' names are stated in the caption.

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CASE NO. _____

In The

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October Term, 1984

McGILL INCORPORATED,

Petitioner,

v.

JOHN ZINK COMPANY,

Respondent.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

PETITION FOR WRIT OF CERTIORARI

The Petitioner, McGill Incorporated, requests that a writ of certiorari issue to review the judgment of the United States Court of Appeals for the Federal Circuit entered in this case on April 27, 1984.

OPINIONS BELOW

The opinion of the United States Court of Appeals for the Federal Circuit (App. 1-22)[1] is reported at 736

[1]Citations to the Appendix to this Petition are prefaced by "App.", followed by the page number. Citations to the Joint Appendix filed in the Court of Appeals are prefaced by "JA", followed by the page number. Citations to the trial transcript are prefaced by "Tr.", followed by the page number.

F.2d 666 (Fed. Cir. 1984). The order entered in the case by the United States District Court for the Northern District of Oklahoma (App. 23-34) is unreported.

JURISDICTION

The Petitioner is seeking a writ of certiorari to the United States Court of Appeals for the Federal Circuit in order to review a judgment entered on April 27, 1984 (App. 34-35).

A petition for rehearing was denied by the Court of Appeals panel on June 4, 1984 (App. 36-37). A suggestion for rehearing *in banc* was accepted by the Court of Appeals on June 15, 1984 (App. 38-39); however, the Court of Appeals subsequently declined rehearing *in banc* on July 16, 1984 (App. 39). A second suggestion for rehearing *in banc* was declined September 6, 1984 (App. 40).

The Chief Justice entered an order extending the time within which to petition for certiorari to November 1, 1984 (No. A-135).

Jurisdiction is invoked under 28 U.S.C. § 1254(1).

CONSTITUTIONAL AND STATUTORY PROVISIONS INVOLVED

United States Constitution, amendment VII provides in pertinent portion:

> . . . no fact tried by a jury, shall be otherwise reexamined in any Court of the United States, than according to the rules of the common law.

35 U.S.C. § 112 provides, in pertinent portion:

> . . .

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
>
> . . .
>
> An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

35 U.S.C. § 271(a) provides:

> Except as otherwise provided in this title, whoever without authority makes, uses or sells any patented invention, within the United States during the term of the patent therefor, infringes the patent.

STATEMENT OF THE CASE

The Petitioner ("McGill") filed this action for patent infringement against the Respondent ("Zink") in the United States District Court for the Northern District of Oklahoma. Federal jurisdiction was based on 28 U.S.C. § 1338(a).

1. The Parties and Their Lawsuit.

McGill is an Oklahoma company which was founded in 1973 by a Tulsa man, James McGill (JA 37a, 40a-41a).

In 1976, Mr. McGill and his firm's first employee, William Scott, invented a new kind of process for use in controlling the air pollution associated with large volumes of gasoline, such as the gasoline held in storage tanks and tank trucks (JA 41a-42a, 78a-80a). Two years later, the Patent and Trademark Office issued a patent on their invention (JA 557a).

McGill began offering equipment which practiced the patented process to oil companies beginning in late 1976 (JA 92a). Initially, the McGill process met with considerable skepticism, because potential customers did not think that the process would work (Tr. 1369-70). Eventually, however, the efficiency and economy of the McGill process earned it widespread acceptance: as of late 1982, the McGill equipment had earned over 52 million dollars in sales revenue (JA 84a-87a).

Zink is a subsidiary of Pittsburg-based Allegheny International, Inc.; one of its numerous lines of business is the manufacture and sale of air pollution control equipment (JA 137a-138a). In 1978, after learning of the success of McGill's vapor recovery equipment, Zink instructed its engineers to investigate the McGill system and to build a competitive system (JA 121a, 134a, 138a-140a). Zink engineers subsequently visited a gasoline storage facility where a McGill system had been installed, and made photocopies of the plans of the McGill system (JA 121a-125a). When Zink began marketing a competitive vapor recovery system in 1979, the Zink process turned out to be identical to that used in McGill's commercial equipment (JA 188a, 189a, 417a). Many of the smallest design details of the Zink system, such as orientation of pipes,

placement of components, and locations of connections, were identical to those in the McGill system (JA 189a-207a).

McGill filed this patent infringement lawsuit in early 1980. Zink denied that it infringed the patent, and contended that the patent was invalid. The case was tried to a jury for 2½ weeks during November and December of 1982.

2. The Evidence of Patent Infringement by Equivalents.

The claim of the McGill patent in suit set out a 10-step process for recovering hydrocarbon vapors. Zink's expert witness did not dispute that Zink used 9 of the 10 patented steps (Tr. 1295-98). The one remaining step of the patent claim provided for absorption to be carried out with a "recovered liquid hydrocarbon absorbent." In the corresponding Zink process step, gasoline was used as the absorbent. Zink contended that its gasoline absorbent was not "recovered liquid hydrocarbon absorbent", and therefore denied that it had infringed the patent claim.

McGill based its contention of infringement on two theories. First, McGill claimed that Zink's gasoline absorbent was the same thing as "recovered liquid hydrocarbon absorbent", and that Zink "literally" infringed the patent claim. This contention was rejected by the Court of Appeals, and is not being challenged here.

Second, McGill contended that, even if the patent was not literally infringed, Zink's gasoline absorbent was equivalent to the claimed "recovered liquid hydrocarbon absorbent", and that Zink therefore infringed the claim under

the doctrine of equivalents announced in this Court's decision in *Graver Tank & Manufacturing Co. v. Linde Air Products Co.*, 339 U.S. 605 (1950).

To support its contention of infringement under the doctrine of equivalents, McGill offered the following evidence:

1. Operating tests showed that the process worked with either gasoline (used in the Zink system) or recovered liquid hydrocarbon (which the Court of Appeals eventually determined the patent literally covered) (JA 61a, 66a, 475a-487a; Tr. 1168).

2. The McGill patent expressly states that either gasoline (JA 561a, column 4, lines 23-24) or recovered liquid hydrocarbon (JA 561a, column 3, lines 55-59) can be used as the absorbent in the process. The disclosure of both types of absorbents in the patent was admitted by Zink's own expert witness (JA 425a).

3. Recovered liquid hydrocarbon and gasoline have a close chemical relationship: recovered liquid hydrocarbon is just gasoline without its higher molecular weight ingredients (Tr. 875).

The case was submitted to the jury on both theories: literal infringement and infringement under the doctrine of equivalents (Tr. 1941-42).

Zink's principal defense against McGill's contention of infringement under the doctrine of equivalents was the so-called doctrine of "file wrapper estoppel" announced in *Exhibit Supply Co. v. Ace Patents Corp.*, 315 U.S. 126

(1942). However, the file wrapper estoppel defense was not submitted to the jury in this case, and the Court of Appeals did not rely on it (App. 14-15).

3. The Jury's Verdict for the Petitioner.

In response to the District Court's special interrogatories, the jury found that Zink had infringed the patent and rejected Zink's challenges to the patent's validity. The jury further found that Zink's infringement had been willful, and awarded McGill $8,000,000.00 in damages (JA 12a-16a).

The District Court denied Zink's motion for judgment n.o.v. on the issue of patent infringement, and entered judgment on the jury's verdict (App. 24-25; JA 29a).

4. The Court of Appeals' Panel Reversal.

A three-judge panel of the U.S. Court of Appeals for the Federal Circuit reversed the District Court's judgment on the ground that there was insufficient evidence to support the jury's finding of patent infringement (App. 19-20).

In an opinion filed in April of 1984, the panel decided that Zink did not literally infringe the McGill patent claim. Although the doctrine of equivalents had been submitted to the jury and had been briefed and argued on appeal, the panel's opinion did not address the issue of equivalency. Without reaching the issue of infringement under the doctrine of equivalents, the panel reversed the damage award to McGill.

After a petition for rehearing was filed by McGill, the panel amended its opinion to add a one-paragraph finding that there was also insufficient evidence of infringement under the doctrine of equivalents (App. 37). The panel

distinguished Zink's process from the process claimed in the patent on the ground that the processes used "different ways" to perform the same function. The panel's opinion did not discuss the evidence of equivalency offered by McGill.

5 The Rehearing In Banc and Its Resolution.

About two weeks after the panel issued its modified opinion, the Court of Appeals for the Federal Circuit ordered rehearing of the case *in banc* (App. 38-39). One month later, without explanation, the Court of Appeals reversed its earlier order and declined rehearing *in banc* (App. 39).

REASONS FOR GRANTING THE WRIT

This case presents a recurring question of considerable importance to the owners of the over 1.1 million United States patents now in force, and to the actual and potential competitors of these patent owners. The question relates to the legal standard controlling how close a competitor can get to a patent without infringing it.

Patent infringement is defined by 35 U.S.C. § 271(a) as an unauthorized making, using or selling of a "patented invention" within the United States. The "invention" of a patent is defined by the patent's claims, which are required by 35 U.S.C. § 112 to particularly point out and distinctly claim "the subject matter which the applicant regards as his invention." While these statutes may suggest that a patent cannot be infringed beyond the literal limits of its claims, this has not, in fact, ever been the law.

The problem with limiting the scope of a patent to the words of its claims is that words are often all too easy to design around. A copier can avoid the literal terms of

a patent claims simply by substituting an equivalent feature which has a different name than the corresponding claimed feature. If a competitor could appropriate the advantages of a patented invention in this way, without liability for infringement, a patent would be virtually worthless.

In order to do justice to the patent owner in this situation, the courts have developed the rule that substitution of an equivalent for a feature defined by a patent claim will not avoid infringement. This "doctrine of equivalents" was first approved by this Court in *Winans v. Denmead*, 15 How. 330 (1854). Its purpose is "to temper unsparing logic and prevent an infringer from stealing the benefit of the invention." *Royal Typewriter Co. v. Remington Rand, Inc.*, 168 F.2d 691, 692 (2nd Cir. 1948) (L. Hand, J.).

The doctrine of equivalents was last applied by this Court in *Graver Tank & Manufacturing Co. v. Linde Air Products*, 339 U.S. 605 (1950). There, the Court defined an equivalent as something which performs "substantially the same function in substantially the same way to obtain the same result." 339 U.S. at 608. The *Graver* decision characterized equivalence as a factual question, depending on consideration of the purpose for which an ingredient is used, its qualities, its function, and whether others would have known of the interchangeability of the claimed ingredient for another. 339 U.S. at 609.

During the past 34 years, the doctrine of equivalents has been applied hundreds of times by lower federal trial and appellate courts. Since the doctrine defines the outer limits of patent infringement, its economic consequences

have been substantial: any decision on whether or not to compete in a patent-oriented market must inevitably take the doctrine into account. Yet the doctrine's evolution and development since 1950 has occurred almost entirely in the lower federal courts: with one exception, this Court has not returned to the doctrine of equivalents since the *Graver* decision.

The one exception is *Standard Industries, Inc. v. Tigrett Industries, Inc.*, 397 U.S. 586 (1970). There, the United States, as amicus curiae, criticized the *Graver* decision as an undue expansion of the rights of patent owners, and urged the Court either to abolish or fundamentally reformulate the doctrine of equivalents.[2] These arguments were left undecided, however, when the case was affirmed by an equally divided Court.

This case offers the Court an opportunity to return to the issue left open after *Standard Industries:* whether the doctrine of equivalents continues to have validity. This case is a particularly appropriate one in which to address this issue, because the decision below has so limited the concept of equivalency as to deprive it of most, if not all, of its effectiveness.

There was no dispute in this case that the Respondent used 9 of the 10 steps of the Petitioner's patented process. As to the remaining step, the Petitioner offered substantial evidence that the Respondent's gasoline absorbent was equivalent to the "recovered liquid hydrocarbon absorbent" claimed in the patent. The most compelling evidence of equivalency was a statement in the text of the patent itself

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[2]APLA Bulletin, January-February 1970, at 28-29.

saying that a gasoline absorbent could be used in the patented process. The Respondent not only used this gasoline absorbent in its own process, but also used it in the same concentration range ("L/V ratio") recommended in the patent. Yet, even though the jury had been instructed on the doctrine of equivalents, and even though the doctrine had been argued on appeal, the Court of Appeals' first action in this case was to overturn the jury's verdict because there was no infringement of the literal words of the patent claim: the Court did not even reach the equivalency issue.

After a petition for rehearing was filed, the Court of Appeals added a paragraph to its opinion holding that there was insufficient evidence of infringement by equivalents because the Respondent's process operated in a "different way" than the patented process (App. 37). Unlike the *Graver* court, the Court of Appeals in this case did not analyze the evidence of equivalency offered by the Petitioner; nor did the Court of Appeals explain why reasonable jurors could not rely on this evidence to find infringement. Instead, the Court of Appeals simply offered its own factual conclusion that the two absorbents were "different."

By refusing to uphold a factual finding of infringement when it believed the accused process was "different" than the claim, the Court of Appeals has left the doctrine of equivalents little, if any, room in which to operate. Any departure by a competitor from the words of a claim can be characterized as making an ingredient "different" from the claim. If the doctrine of equivalents can be avoided by the mere characterization of two things as "different", and thus not "substantially the same", there will seldom, if ever, be any occasion when the doctrine can be invoked.

The Court of Appeals' reading of the doctrine of equivalents in this case is particularly troubling in view of the Seventh Amendment's jury trial guarantee. As noted in the *Graver* decision, equivalency is a factual question. 339 U.S. at 609. A jury's finding of infringement under the doctrine is therefore protected from appellate reexamination other "than according to the rules of the common law." The Federal Circuit panel effectively treated the equivalency issue as a question of law, on which it was free to make its own determination that the two processes were "different." In so doing, the panel chose to disregard the evidence which supported the jury's infringement finding—a procedure not in accordance with "the rules of the common law."

The decision below apparently generated some controversy within the Federal Circuit: the Court granted rehearing *in banc* even before a response to the *in banc* suggestion could be filed. Yet the Court of Appeals later decided, by an undisclosed vote, not to rehear the case. Given the Federal Circuit's internal rule requiring its panels to follow previous decisions of other panels[3], it appears that a majority of the Federal Circuit judges is now willing to accept the highly restrictive approach to the doctrine of equivalents taken by the panel in this case. In view of the Federal Circuit's exclusive, nationwide jurisdiction over patent infringement cases, the decision in this case suggests an unpromising future for the doctrine of equivalents.

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[3]The Third Branch, October 1983, at 8 (interview with Chief Judge Markey).

As applied by the Court of Appeals in this case, the doctrine of equivalents has become little more than a semantic exercise for appellate judges—a matter of whether judges will call things "substantially the same" or "different". This Court should grant certiorari and determine whether the doctrine of equivalents, as it has been heretofore applied by judges and juries, continues to have validity.

CONCLUSION

A writ of certiorari should be granted.

Respectfully submitted,

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APPENDIX

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

Appeal No. 83-1198

McGILL INCORPORATED,

Appellee,

v.

JOHN ZINK COMPANY,

Appellant.

Appeal No. 83-1217

McGILL INCORPORATED,

Cross-Appellant,

v.

JOHN ZINK COMPANY,

Cross-Appellee.

DECIDED: April 27, 1984

Before KASHIWA, *Circuit Judge*, COWEN, *Senior Circuit Judge*, and BENNETT, *Circuit Judge*.

KASHIWA, *Circuit Judge*.

This is a consolidated appeal from a judgment of the United States District Court for the Northern District of Oklahoma (No. 80-C-17-E), entered December 7, 1982, and from a post-trial order entered June 22, 1983. The judgment was in favor of appellee, owner of U.S. Patent No. 4,066,423 (the "'423 patent"), and the district court awarded damages of $8,000,000. We affirm in part and reverse in part.

The Invention

The patented invention relates to a process for recovering hydrocarbon vapors from an air-hydrocarbon mixture. It is a pollution-prevention process for recovering hydrocarbon vapors that have been vented from a storage tank. Appellee's invention is best described by its claim at issue:

> 2. A process for recovering hydrocarbon from an air-hydrocarbon mixture, comprising:
>
> passing the air-hydrocarbon mixture through a solid adsorbent bed at slightly above atmospheric pressure, which bed is capable of selectively adsorbing the hydrocarbon components from the mixture to leave substantially hydrocarbon free air;
>
> venting the substantially hydrocarbon free air to the atmosphere;
>
> subjecting the hydrocarbon laden solid adsorbent bed to a near vacuum with a liquid ring vacuum pump to desorb the hydrocarbon components therefrom and produce a rich air-hydrocarbon vapor mixture containing a liquid from the liquid ring vacuum pump and a recovered liquid hydrocarbon;
>
> separating the liquid from the liquid ring vacuum pump and the recovered liquid hydrocarbon from the rich air-hydrocarbon vapor mixture;
>
> absorbing substantially all of the hydrocarbon components from the rich air-hydrocarbon vapor mixture with *recovered liquid hydrocarbon absorbent* in an absorber operating with a sufficiently high L/V ratio to produce a constant composition absorber overhead gas and a recovered liquid hydrocarbon mixed with said absorbent;
>
> recycling the absorber overhead gas from the absorption step to a second solid adsorbent bed, capable

of selectively absorbing the hydrocarbon therein to leave a substantially free hydrocarbon recycle air;

venting the substantially free hydrocarbon recycle air to the atmosphere;

separating the liquid ring vacuum pump liquid from the recovered liquid hydrocarbon produced in the separation step;

cooling the liquid ring vacuum pump liquid; and

recycling said liquid ring vacuum pump liquid for use in the liquid ring vacuum pump.

[Emphasis added.]

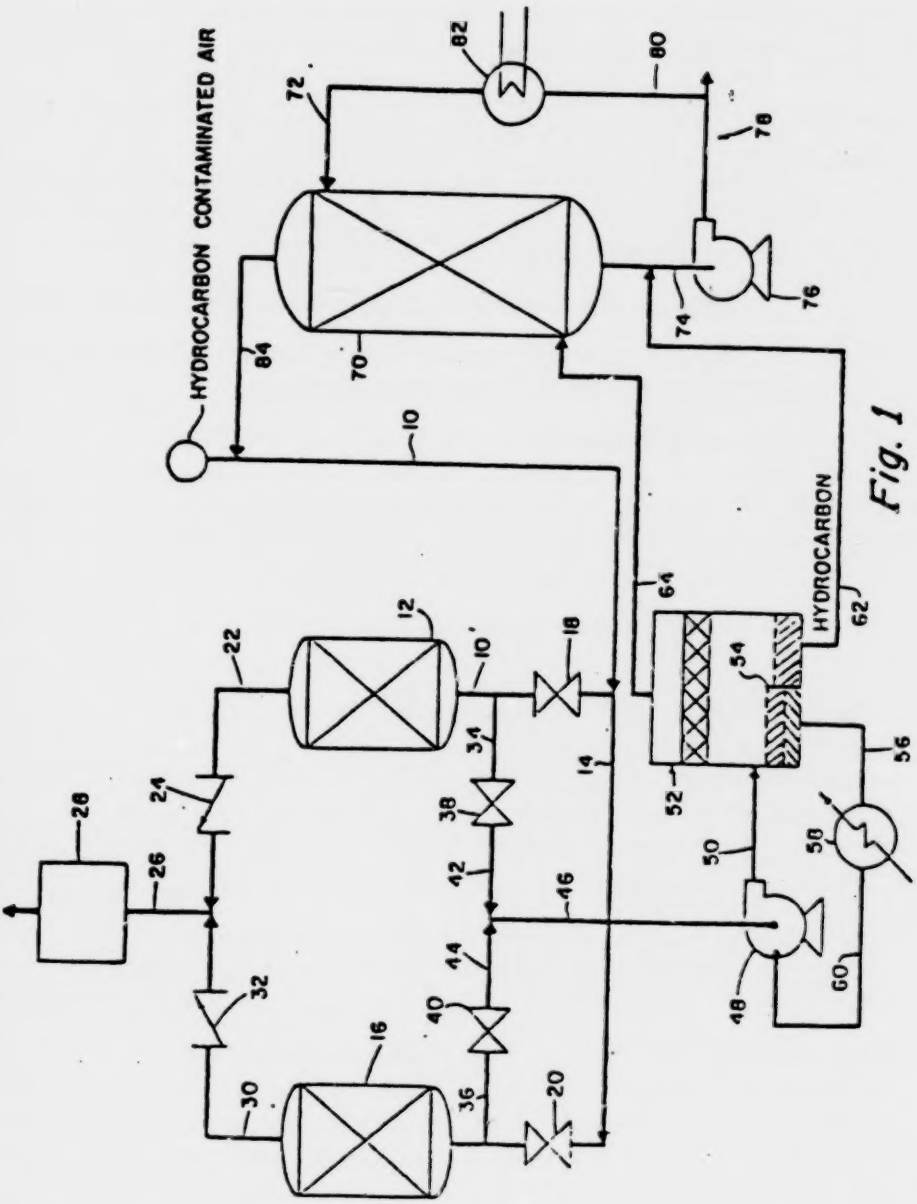
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Fig. 1

In operation, as best illustrated by Figure 1 of the patent, a source of light hydrocarbon contaminated air, such as that expelled from a gasoline storage tank, enters the lower portion of adsorbent vessel 12 via line 10. With valves 20 and 38 closed, hydrocarbon contaminated air is introduced at a pressure slightly above atmosphere. As the hydrocarbon contaminated air flows through the vessel, the adsorbent material packed in that vessel adsorbs substantially all of the hydrocarbon. Clean air is then expelled from the top of the vessel through line 22, check valve 24, line 26, and flame arrester 28. Prior to reaching the saturation point of the adsorbent material packed in adsorbent vessel 12, valves 18 and 40 are closed and valve 20 is opened to route the hydrocarbon contaminated air from line 10 through line 14 to adsorbent vessel 16 for use during the regeneration of the adsorbent material in vessel 12.

To regenerate the adsorbent material of vessel 12, valve 38 is first opened and a vacuum produced by pump 48 in vessel 12 desorbs the hydrocarbon from the adsorbent material to produce a rich air-hydrocarbon mixture comprised of approximately 85 to 90% hydrocarbon by volume. Pump 48 is a liquid ring vacuum pump that is capable of producing a near vacuum in either adsorbent vessel during regeneration. As this rich air-hydrocarbon mixture comes in direct contact with the pumping liquid used by pump 48, cooling of the air-hydrocarbon mixture occurs and a portion of the heavier hydrocarbon components in pump 48 condenses. Effluent from pump 48 is then admitted to separator 52 via line 50. Separator 52 is a vessel operated slightly above atmospheric pressure and designed to separate the vapor and liquid components of

the pump effluent and to further separate the immiscible liquid used by the liquid ring pump from any recovered liquid hydrocarbon[1] condensed by the inherent cooling action of the pump.

The liquid components of the pump effluent are separated by a weir 54 located at the bottom portion of separator 52 over which the lighter hydrocarbon liquid may flow. The heavier pumping liquid, typically water, trapped by the weir, is withdrawn from bottom of the separator 52 by line 56 connected between the bottom of the separator and cooler 58. Cooled pump liquid from cooler 58 is recycled for use in pump 48 through line 60 connected between cooler 58 and pump 48. The specification of the patent states that the "[r]ecovered liquid hydrocarbon overflowing the weir 54 is withdrawn from separator 52 through line 62 connected between the lower portion of separator 52 and line 74 for use as a liquid adsorbent [sic]." The vapor phase of the pump effluent is withdrawn from separator 52 through line 64 connected between the upper portion of the separator and the bottom portion of absorber 70.

Absorber 70 is a conventional absorber operating near ambient temperature and slightly above atmospheric pressure. In absorber 70, the vapor from separator 52 comes in direct countercurrent contact with recovered liquid hydrocarbon introduced at the upper portion of the absorber via line 72 and the hydrocarbon components in the vapor

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[1]Since the terms "recovered liquid hydrocarbon" and "recovered hydrocarbon liquid" are used interchangeably in the patent and the parties do not dispute the fact that both terms define the same product, only the terms "recovered liquid hydrocarbon" is used in this opinion.

are substantially absorbed. Recovered liquid hydrocarbon is withdrawn from the bottom of the absorber and passed to pump 76 via line 74. A portion of the recovered liquid hydrocarbon is discharged from the pump through line 78, and another portion passes from line 78 through line 80 to cooler 82. This latter portion of the recovered liquid hydrocarbon is first cooled and then recycled to the top of absorber 70 via line 72 for use as the absorbent. Vapor from the top of absorber 70, comprising approximately 20 to 30% hydrocarbon by volume, passes through line 84 from the top of the absorber to line 10 for recycling through absorbent vessels 12 and 16.

Prosecution History

When appellee, McGill Incorporated ("McGill"), filed its application, it claimed (original claim 7) the use of a "liquid hydrocarbon absorbent" in absorber 70.[2] A de-

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[2]Original claim 7 states:

7. A process for recovering hydrocarbon from an air-hydrocarbon mixture, comprising:

passing the air-hydrocarbon mixture through a solid adsorbent bed at slightly above atmospheric pressure, which bed is capable of selectively adsorbing the hydrocarbon components from the mixture to leave substantially hydrocarbon free air;

venting the substantially hydrocarbon free air to the atmosphere;

subjecting the hydrocarbon laden solid adsorbent bed to a near vacuum with a liquid ring vacuum pump to desorb the hydrocarbon components therefrom and produce a rich air-hydrocarbon vapor mixture containing a liquid from the liquid ring vacuum pump and a recovered liquid hydrocarbon;

(Continued on next page)

pendent claim (original claim 8) called for:

> A process, as resided in claim 7, wherein the liquid hydrocarbon *absorbent is recovered liquid hydrocarbon.* [Emphasis added.]

A further dependent claim (original claim 9)[3] recited the process of claim 8 plus limitations relating to certain details of the vacuum pump.

In his first Office Action, the examiner rejected all claims; claims 6-8 for obviousness and claims 1-12 under 35 U.S.C. § 112. The obviousness rejection related to the cooling function of pump 48. The examiner further stated:

> Claims 9-12 contain allowable subject matter and would be allowed if claim 9 is written in independent form to include all the limitations now present through dependency and if the 112 rejection is overcome.

(Continued from previous page)

separating the liquid from the liquid ring vacuum pump and the recovered liquid hydrocarbon from the rich air-hydrocarbon vapor mixture;

absorbing substantially all of the hydrocarbon components from the rich air-hydrocarbon vapor mixture with a *liquid hydrocarbon absorbent* to produce a constant composition absorber overhead gas and a recovered liquid hydrocarbon mixed with said absorbent;

recycling the absorber overhead gas from the absorption step to a second solid adsorbent bed, capable of selectively absorbing the hydrocarbon therein to leave a substantially free hydrocarbon recycle air; and

venting the substantially free hydrocarbon recycle air to the atmosphere. [Emphasis added.]

[3]Original claim 9 states:

9. A process, as recited in claim 8, further comprising:

separating the liquid ring vacuum pump liquid from the recovered liquid hydrocarbon produced in the separation step;

cooling the liquid ring vacuum pump liquid; and

recycling said liquid ring vacuum pump liquid for use in the liquid ring vacuum pump.

McGill amended claim 7 by inserting the phrase "in an absorber operating with a sufficiently high L/V ratio" in the fifth paragraph of claim 7.[4]

In his final Office Action, the examiner rejected claims 7 and 8, and objected to claim 9. Claims 7 and 8 were again rejected under 35 U.S.C. § 103 in relation to the cooling function. The examiner again stated:

> Claims 9-12 contain allowable subject matter and would be allowed when claim 9 is written in independent form to include all the limitations now present through dependency. Claims 10-12 depend from claim 9.

In response, McGill cancelled claims 7 and 8 and rewrote claim 9 in the independent form as new claim 14 which ultimately was allowed as the claim at issue, claim 2. In addition, McGill remarked:

> Claims 7-8 have been cancelled in view of the Examiner's rejections. Claim 9 has been rewritten in independent form as new claim 14 *including the limitations* which were present through dependency. Claim 10 has been corrected to depend upon the new claim 14. [Emphasis added.]

District Court Proceeding

At the close of all the evidence, appellant, John Zink Company ("Zink"), moved for directed verdict which was

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[4]Amended claim 7, in pertinent parts, states:

> absorbing substantially all of the hydrocarbon components from the rich air-hydrocarbon vapor mixture with a liquid hydrocarbon absorbent *in an absorber operating with a sufficiently high L/V ratio* to produce a constant composition absorber overhead gas and a recovered liquid hydrocarbon mixed with said absorbent. [Emphasis in original.]

denied by the district court. A jury, after answering a set of special interrogatories pursuant to Fed. R. Civ. P. 49(b), returned a general verdict in favor of McGill. The jury found, *inter alia,* that McGill's invention would not have been obvious at the time of the invention and that the patent disclosed the best mode for practicing the invention. In addition, Zink was found to have infringed McGill's claim 2 and accordingly, McGill was awarded damages in the amount of $8,000,000. The district court entered a judgment in accordance with the jury verdict on December 7, 1982. In its order of June 22, 1983, the district court denied, *inter alia,* (1) Zink's motion for judgment notwithstanding the verdict ("JNOV") or in the alternative, motion for a new trial, and (2) McGill's motion to amend the judgment to include awards of increased damages, prejudgment interest, and attorneys' fees.

OPINION

I

In determining patent infringement, two inquiries are involved—(1) the scope of the claims and (2) whether the claimed invention has been infringed. *SSIH Equipment S.A. v. USITC,* 713 F.2d 746, 757, 218 USPQ 673, 688 (Fed. Cir. 1983); *Autogiro Co. of America v. United States,* 384 F.2d 391, 401, 155 USPQ 697, 705 (Ct. Cl. 1967). The first inquiry, a determination of the scope of the claims, is a question of law. *SSIH Equipment, supra.* If the language of the claims is undisputed, the district court could interpret or construe the undisputed claims as a matter of law. *Singer Manufacturing Co. v. Cramer,* 192 U.S. 265, 275 (1904); *see Super Products Corp. v. D P Way Corp.,* 546 F.2d 748, 756, 192 USPQ 417, 423 (7th Cir. 1976); *cf.*

Chemical Construction Corp .v. Continental Engineering, Ltd., 407 F.2d 989, 991 (5th Cir. 1969). If, however, the meaning of a term of art in the claims is disputed and extrinsic evidence is needed to explain the meaning, construction of the claims could be left to a jury. *Envirotech Corp. v. Al George, Inc.*, App. No. 83-1107 (Fed. Cir. Mar. 19, 1984); *cf. Hong Kong Export Credit Insurance Corp. v. Dun & Bradstreet*, 414 F. Supp. 153, 157 (S.D.N.Y 1975). In the latter instance, the jury cannot be directed to the disputed meaning for the term of art. *Cf. Butler v. Local Union 823, International Brotherhood of Teamsters*, 514 F.2d 442, 452 (8th Cir.), *cert. denied*, 423 U.S. 924 (1975).

Where, as here, the overall question of infringement was answered by a jury and the losing party's motion for JNOV was denied, an appellate court's review of the denial is limited. *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1546, 220 USPQ 193, 197 (Fed. Cir. 1983). The appellate court is permitted to review only the sufficiency of the evidence, a question of law. *Baltimore & Carolina Line, Inc. v. Redman*, 295 U.S. 654, 659 (1935). Such a review must be conducted within a set of guidelines which include: (1) a consideration of all the evidence, (2) in a light most favorable to the non-moving party, (3) drawing all reasonable inferences favorable to that party, (4) without determining the credibility of the witnesses, and (5) without substituting the court's choice for that of the jury between conflicting elements in the evidence. *Connell, supra.*

To obtain a reversal, appellant (the moving party below) must persuade us that either (1) the jury's findings were not supported by substantial evidence or (2)

those findings cannot support the legal conclusions which necessarily were drawn by the jury in forming its verdict. *Railroad Dynamics, Inc. v. A. Stucki Co.*, — F.2d —, —, 220 USPQ 929, 936 (Fed. Cir. 1984.) If, however, there was substantial evidence of such quality and weight that reasonable and fair-minded men in the exercise of impartial judgment could reasonably return a verdict for the non-moving party, then the denial of the JNOV was correct. *Envirotech, supra*, slip op. at 10-11.

In the instant case, the jury's finding of infringement was predicated on construction of claim 2. To obtain a reversal, Zink must demonstrate that no reasonable juror could have interpreted the claim in the fashion that supports the infringement finding, *e.g.*, in the fashion urged by McGill. Since the jury did not make express findings on claim construction, we must presume the existence of facts necessary to support the claim construction urged by McGill and determine if those facts were supported by substantial evidence. *Railroad Dynamics, supra.* Zink must convince us that there is no set of facts, consistent with McGill's interpretation, that was supported by substantial evidence.

Claim Construction—Claim At Issue

The threshold requirement in claim construction is an examination of the claim at issue. In the instant case, McGill argues that the phrase "recovered liquid hydrocarbon absorbent" in the claim at issue means an undefined absorbent that is capable of recovering a substance called "recovered liquid hydrocarbon". Zink, on the other hand, argues that the phrase means that the recovered liquid hydrocarbon is being used as an absorbent.

Thus, Zink's use of fresh gasoline in the absorption step would be an infringing use under McGill's interpretation and not an infringing use under Zink's.

To support its interpretation, McGill first contends that "recovered liquid hydrocarbon absorbent" and "recovered liquid hydrocarbon" cannot be the same substance due to the following passage in the fifth paragraph of claim 2: "a recovered liquid hydrocarbon mixed with said absorbent". It seems to argue that mixing requires the presence of two different substances. Zink, however, counters with the contention that the overall language of claim 2 is consistent with its interpretation. In addition, Zink argues that the use of the words "said absorbent" merely refers to previously defined "recovered liquid hydrocarbon absorbent" and does not mean that the recovered liquid hydrocarbon is not being used as the absorbent.

Thus, the language of the claim at issue is in dispute,[5] and Zink contends that other tools of claim construction must be used to interpret the claim.

Claim Construction—File History

In construing or interpreting claims, a whole host of factors may be considered. *Fromson v. Advance Offset Plate, Inc.*, 720 F.2d 1565, 219 USPQ 1137 (Fed. Cir. 1983); *Autogiro*, 384 F.2d at 401, 155 USPQ at 705. One

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[5]It is interesting to note that the district court could determine in the first instance, as a matter of law, whether or not the language of the claim at issue was ambiguous and would require extrinsic evidence for interpreting that claim. *Cf. Seitz v. Brewers' Refrigerating Mach. Co.*, 141 U.S. 510, 517 (1891); *Motor Carriers Council of St. Louis, Inc. v. Local Union No. 600*, 486 F.2d 650, 653 (8th Cir. 1973).

such factor is the prosecution history of the patent. The Court, in *Graham v. John Deere Co.*, 383 U.S. 1, 33 (1966), stated that "an invention is construed not only in light of the claims, but also with refernce to the file wrapper or prosecution history in the Patent Office."

In the instant case, McGill contends that prosecution history estoppel is inapplicable since the claim at issue and in particular, the phrase "recovered liquid hydrocarbon absorbent," was not amended or distinguished in response to a prior art rejection, citing *Hughes Aircraft Co. v. United States*, 717 F.2d 1341, 1362, 219 USPQ 473, 481 (Fed. Cir. 1983). It argues that the amendments to the predecessor claims of the claim at issue were made only in response to a section 112 rejection for original claim 9 and in response to a rejection regarding the vacuum pump for original claim 7. Since there were neither amendments nor arguments in the file history regarding "recovered liquid hydrocarbon absorbent," McGill contends that there was no surrender by amendment that could support a finding of estoppel, citing *Caterpillar Tractor Co. v. Berco, S.P.A.*, 714 F.2d 1110, 1115, 219 USPQ 185, 187-88 (Fed. Cir. 1983). In addition, McGill argues that whether or not the absorbent was "recovered" was not a pivotal issue during prosecution because the examiner twice rejected both claim 7 and 8 on the basis of the same prior art without differentiating the only difference between these claims—"recovered." If this issue had been pivotal, McGill contends, the examiner would have allowed claim 8 and rejected claim 7. McGill concludes that the phrase "recovered liquid hydrocarbon absorbent" means an undefined absorbent that is capable of recovering a substance called "recovered liquid hydrocarbon." Zink's use of fresh gasoline as the absorbent in

the absorption step is, therefore, an infringing use. We disagree.

Prosecution history may be used not only in an estoppel context but also as a claim construction tool. *Fromson, supra.* Where, as here, an unambiguous limitation such as the one that was present in original claim 8 was voluntarily added to a subsequent claim during prosecution, it may be used to construe the claim. In the instant case, the examiner twice remarked that original claim 9 would be allowed if it were rewritten in an idependent form and included *all the limitations* present through dependency. The phrase "recovered liquid hydrocarbon absorbent" in original claim 8 was clearly a limitation, a limitation having the meaning: recovered liquid hydrocarbon being used as an absorbent. Since this condition for allowance was clear and the limitation of original claim 8 was clear on its face, the appearance of the phrase in new claim 14 was an indication, as interpreted by Zink, that the limitation of original claim 8 had been incorporated into the new claim.

Claim Construction—Specification

Another factor in claim construction is the use of the patent specification. *McClain v. Ortmayer,* 141 U.S. 419 (1891); *Fromson,* 720 F.2d at 1569-70, 219 USPQ at 1140. Words which were defined in the specification must be given the same meaning when used in a claim. *General Electric Co. v. United States,* 572 F.2d 745, 753, 198 USPQ 65, 71 (Ct. Cl. 1978). In *Autogiro,* 348 F.2d at 397-98, 155 USPQ at 702-3, the Court of Claims stated:

> In serving its statutory purpose, the specification aids in ascertaining the scope and meaning of the

> language employed in the claims inasmuch as words must be used in the same way in both the claims and the specification. U.S.Pat.Off. Rule 75(d). The use of the specification as a concordance for the claims is accepted by almost every court, and is a basic concept of patent law. [Footnotes omitted.]

In the specification of the patent at issue, the phrase "recovered liquid hydrocarbon absorbent" is not defined. However, the phrase "recovered liquid hydrocarbon" is not defined. However, the phrase "recovered liquid hydrocarbon" and the word "absorbent" are defined. For example, the specification states that the "[r]ecovered liquid hydrocarbon overflowing the weir 54 is withdrawn from separator 52 through line 62 connected between the lower portion of separator 52 and line 74 for use as a liquid adsorbent [sic]." The specification then describes the direct countercurrent contact of the vapor hydrocarbon component and the recovered liquid hydrocarbon "introduced in the upper portion of the absorber via line 72." In addition, the specification discloses that a portion of the recovered liquid hydrocarbon discharged from absorber 70 is first cooled by cooler 82 and then pumped via line 72 to the top of absorber 70 "for use as absorbent."

It is clear from the specification that the recovered liquid hydrocarbon functions as the absorbent in absorber 70. Contrary to McGill's construction, the phrase "recovered liquid hydrocarbon absorbent" does not mean an undefined absorbent that is capable of recovering a substance called "recovered liquid hydrocarbon." In addition, all of the drawings of the patent show only the use of recovered liquid hydrocarbon as the absorbent. *Dominion Magnesium Ltd. v. United States,* 320 F.2d 388,

394, 138 USPQ 306, 310 (Ct. Cl. 1963). Thus, the phrase "recovered liquid hydrocarbon absorbent" in claim 2, as urged by Zink, has the meaning that was defined in the specification which is recovered liquid hydrocarbon being used as an absorbent.

Claim Construction—Other Claims

A third factor in claim construction is the use of other claims in the patent to determine the scope of the claim at issue. *Fromson*, 720 F.2d at 1570, 219 USPQ at 1140-41; *General Electric*, 572 F.2d at 751, 198 USPQ at 70.

In dependent claim 3,[6] the steps of cooling the recovered liquid hydrocarbon discharged by absorber 70 and the recycling of the cooled liquid to the absorber are claimed. The cooled recovered liquid hydrocarbon are recycled to absorber 70 "for use as absorbent in the absorption step." McGill contends that if independent claim 2 is interpreted to include an absorption step carried out with "recovered liquid hydrocarbon," then the second step of dependent claim 3 would be redundant. As such, it would be an improper reading of a limitation explicitly set forth in a dependent claim into an independent claim, citing *Environmental Designs, Ltd. v. Union Oil Co. of California*, 713

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[6]Claim 3 states:

3. A process, as recited in claim 2, the further steps comprising:

cooling a portion of the recovered liquid by hydrocarbon; and

recycling the cooled recovered liquid hydrocarbon for use as absorbent in the absorption step.

F.2d 693, 699, 218 USPQ 865, 871 (Fed. Cir. 1983). We disagree.

McGill is misconstruing claims 2 and 3. It seems to be reading claim 2 to mean that something other than recovered liquid hydrocarbon was used as the absorbent in the initial or first absorption step. Then, in light of claim 3, only the *cooled* recovered liquid hydrocarbon is being recycled as the absorbent. Since the specification and drawings fail to show the use of anything but the recovered liquid hydrocarbon as the absorbent, Zink contends that this is a tortured reading. It interprets claim 3 to mean that the the "recovered liquid hydrocarbon" of claim 2, already being used as the absorbent, is further cooled and recycled for the same use.

Claim Construction—Expert Testimony

In addition to tools of claim construction such as file history, patent specification, and other claims in the patent, testimony by expert witnesses may be used to construe claims. *See Control Components, Inc. v. Valtek, Inc.*, 609 F.2d 763, 770, 204 USPQ 785, 791 (5th Cir.), *cert. denied*, 449 U.S. 1022 (1980). Such testimony is evidence of construction of the claims as they would be construed by those skilled in the art. *Fromson*, 720 F.2d at 1571, 219 USPQ at 1142. In this regard, experts for both sides testified as to their interpretation of the phrase "recovered liquid hydrocarbon absorbent."

McGill contends that the testimony of two of its experts, a co-inventor of the '423 patent and its patent law expert, supports its interpretation of claim 2. The co-inventor stated that recovered liquid hydrocarbon was not the same thing as recovered liquid hydrocarbon absorb-

ent. The patent law expert interpreted the phrase "recovered liquid hydrocarbon absorbent" to mean an undefined absorbent that is capable of recovery a substance called "recovered liquid hydrocarbon." McGill also contends that U.S. Patent No. 3,770,622, cited in the '423 patent, confirms the interpretation it urges.

Zink, however, disputes the interpretation of McGill's experts. Its own patent law expert equated recovered liquid hydrocarbon with recovered liquid hydrocarbon absorbent. Zink also argues that even a Dr. Garwin, another one of McGill's experts, testified that the absorbent and the recovered liquid hydrocarbon were the same substance. In particular, Zink contends that its cross-examination of McGill's patent law expert raised questions regarding that expert's interpretation of claim 2.

Claim Construction—Conclusion

After considering the record taken as a whole, including the experts' testimony, *Hayes v. Department of the Navy,* App. No. 83-1219, slip op. at 5 (Fed. Cir. Feb. 9, 1984); *see Control Components, supra; cf. Moraine Products v. ICI America, Inc.,* 538 F.2d 134, 146, 191 USPQ 65, 75 (7th Cir.), *cert. denied,* 429 U.S. 941 (1976), we are convinced that there is no set of facts, consistent with McGill's interpretation, that is supported by substantial evidence. Thus, McGill's interpretation of claim 2, a legal conclusion implied from the jury's finding of infringement, cannot be upheld, premised as it must be on facts which are not supported by substantial evidence.

McGill's No. 2 claim is limited, instead, to an absorbent which consisted of recovered liquid hydrocarbon. It is undisputed that fresh gasoline, as used by Zink to recover liquid hydrocarbon, is not "recovered liquid hydro-

carbon" as that term is used in the '423 patent. As such, Zink's use of fresh gasoline as the absorbent in noninfringing. Accordingly, the district court should have granted Zink's motion for JNOV in relation to infringement and the district court's denial is reversed.

II

In addition to the argument that claim 2 was misconstrued as to its scope in regard to the infringement issue, Zink next argues that the district court committed reversible error when it failed to submit to the jury the tripartite factual inquiries as mandated by *Graham*, 383 U.S. at 17. Zink contends that these factual inquiries should have been submitted as special interrogatories to the jury. *American Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1361, 220 USPQ 763, 771-72 (Fed. Cir. 1984); *cf. Railroad Dynamics*, — F.2d at —, 220 USPQ at 938;

The interrogatories which were proposed by Zink are not a part of the record of the district court. *Maryland Casualty Co. v. Jones*, 279 U.S. 792, 796 (1929); *Underwater Devices, Inc. v. Morrison-Knudsen Co.*, 717 F.2d 1380, 1388, 219 USPQ 569, 575 (Fed. Cir. 1983). As admitted by Zink, these interrogatories were submitted to the district judge during a special Sunday session and were never made a part of the record. In light of these facts, we need not and do not reach the issue whether the district court improperly failed to submit *Graham*-type factual interrogatories to the jury.[7]

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[7]Zink's underlying argument regarding obviousness is based on a construction of McGill's claim 2 that includes gasoline as "recovered liquid hydrocarbon absorbent." Since such a construction of claim 2 has been reversed, we need not and do not reach the substantive obviousness issue.

III

Zink further argues that McGill's patent is invalid for failure to disclose the best mode of operation. It contends that a feature known as "purge air" was incorporated into the first commercial unit of McGill's invention and has been used in every unit sold since that time. The failure to disclose this feature in the patent specification violated the best mode requirement,[8] and therefore invalidates the patent.

After hearing testimony, including those of the two inventors, the jury found[9] that Zink failed to prove that the best mode was not disclosed. Since the best mode issue is a question of fact, *see Union Carbide Corp. v. Borg-Warner Corp.*, 550 F.2d 355, 360, 193 USPQ 1, 5-6 (6th Cir. 1977) (Miller, J., sitting by designation) (district court's finding on best mode reviewed under the clearly

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[8]The best mode requirement is stated in the first paragraph of 35 U.S.C. § 112:

> § *112. Specification*
>
> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertain, or with which it is most nearly connected, to make and use the same, and shall set forth the *best mode* contemplated by the inventor of carrying out his invention. [Emphasis added.]

[9]The jury found for McGill in answering special interrogatory No. 7, which states:

> 7. Do you find that the Defendant [Zink] has proved by the required degree of proof that James McGill and William Scott [Inventors] failed to disclose in their patent application the best mode known to either of them at the time for practicing their invention?
>
> Answer Yes or No No

erroneous standard), a jury's determination must be upheld unless Zink can convince us that it was not supported by substantial evidence. In the instant case, it has failed to meet its burden.

Conclusion

Since the issues discussed above are dispositive of this case, we need not and do not reach other issues in the appeal and cross-appeal. Accordingly, that portion of the judgment regarding the validity of the '423 patent is affirmed. That portion of the judgment regarding infringement is reversed, and the damage award is reversed. Each party shall bear its own costs.

AFFIRMED-IN-PART REVERSED-IN-PART

No. 80-C-17-E

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OKLAHOMA

McGILL INCORPORATED,

Plaintiff,

vs.

JOHN ZINK COMPANY,

Defendant.

ORDER ON POST-TRIAL MOTIONS

(Filed June 22, 1983)

The Court has before it the following motions filed by the parties since the date of the jury verdict in this case:

1. Motion of the Defendant for Judgment Notwithstanding the Verdict or in the Alternative for a New Trial;
2. Motion of the Plaintiff to Amend Judgment;
3. Motion of the Plaintiff for Additional Findings of Fact and Conclusions of Law;
4. Application of the Plaintiff for a hearing on post-trial issues.

The Court, having considered the briefs submitted by the parties, and having concluded its review of the record and materials submitted, enters this Order addressing each of the motions filed by the parties.

For reasons further set forth below, the Court finds that it will not be necessary to set a hearing on post-trial motions. Therefore the Plaintiff's application for hearing on post-trial motions will be denied.

DEFENDANT'S MOTION FOR JUDGMENT NOTWITHSTANDING VERDICT OR IN THE ALTERNATIVE FOR NEW TRIAL

At the close of all the evidence, the Defendant filed with the Court a motion for a directed verdict. The Defendant's motion was denied. After the reading of the verdict of the jury the Motion for Directed Verdict was renewed as a Motion for Judgment Notwithstanding the Verdict. In the alternative, the Defendant moves for a new trial. In support of its motion, the Defendant asserts that the verdict is contrary to the overwhelming weight of the evidence and that prejudicial error was committed by the Court in regard to the failure to submit certain interrogatories to the jury, the admission of testimony of

the Plaintiff's patent expert, the failure to instruct on the law relating to abandoned patent applications and the giving of an improper instruction regarding lost profits.

Like the motion for directed verdict, a motion for judgment notwithstanding the verdict (N.O.V.) tests the legal sufficiency of evidence. See *Urti v. Transport Commercial Corp.*, 479 F.2d 766 (5th Cir. 1973). In passing on a motion for judgment N.O.V., the Court is not to weigh the evidence or pass on the credibility of the witnesses or substitute its judgment for that of the jury. Rather it must view the evidence most favorably to the nonmovant and give that party the benefit of all reasonable inferences from the evidence. *Yazzie v. Sullivent*, 561 F.2d 183 (10th Cir. 1977).

> The question in each instance is not whether there is no evidence supporting the party against whom the motion is made but whether there is evidence upon which the jury could probably find a verdict for that party. . . . The philosophy of this doctrine is that there must be a minimum of interference with the jury.

See *Yazzie*, supra at page 188. A "judgment N.O.V. may not be granted unless the evidence points but one way and is susceptible to no reasonable inferences which may sustain the position of the party against whom the motion is made." (Citation omitted). *Barnett v. Life Insurance Company of the Southwest*, 562 F.2d 15, 17 (10th Cir. 1977).

To prevail on its motion for new trial, the Defendant must demonstrate that the verdict was clearly or overwhelmingly against the weight of the evidence. *Prebble v. Brodrick*, 535 F.2d 605 (10th Cir. 1976); *Holmes v. Wack*, 464 F.2d 86 (10th Cir. 1972). Again here it is not the duty of the court to set aside a verdict merely because

it might have reached a different result or because the evidence is sharply in conflict. The Court must abstain from interfering with the verdict of the jury unless it is clear that the jury has reached a "seriously erroneously result". 6A, Moore's Federal Practice, ¶59.08(5).

Under these standards, the Court finds that the evidence in this case was not insufficient to support the verdict, nor was the verdict of the jury against the weight of the evidence.

The Defendant also asserts that the damages awarded by the jury were excessive. The Court here must avoid substituting its own judgment for the jury's, and must uphold the damages award of the jury unless it is "grossly excessive" or "shocks the conscience" of the Court. A trial judge has the chief responsibility for passing on the question as to whether a new trial ought to be granted on the ground of excessive or inadequate damages." (Citation omitted). *Silkwood v. Kerr-McGee Corporation*, 485 F.Supp. 566 (W.D. Okla. 1979). "A verdict should not be set aside unless the Court is convinced that it is the result of bias, prejudice or passion." *Metcalfe v. A.T. & S.F. Ry.*, 491 F.2d 892 (10th Cir. 1974); *Wells v. Colorado College*, F.2d 158 (10th Cir. 1973). Cited in *Silkwood*, supra, page 589.

The verdict in this case does not fall within that category. It is not so clearly excessive that the Court finds it an injustice or unacceptable based upon the evidence. The damages awarded by the jury were well below evidence submitted by the Plaintiff of lost gross profits, and the Court cannot say that the jury did not consider other deductions from profits in the calculation of the award.

The Defendant also asserts that error was committed by the Court in the admission of evidence and in the instructions to the jury. The Court has reviewed its ruiings on the admission of evidence cited by the Defendant and finds that the admission was not erroneous. The Court has also reviewed its instructions and special interrogatories to the jury. The Court finds that the instructions as a whole properly set forth the factual inquiries required by *Graham v. John Deere,* 383 U.S. 1, 86 S.Ct. 684 (1966) in the determination of the obviousness or non-obviousness of the invention. The Court has reexamined its rulings on Defendant's objections to instructions and special interrogatories and finds no error therein.

PLAINTIFF'S MOTION TO AMEND JUDGMENT

In its answer and counter-claim, the Defendant counter-claimed for a declaratory judgment that McGill's patent was invalid and not infringed by the Defendant.

At the conclusion of the Plaintiff's evidence, the Court directed a verdict of non-infringement as to claims 3 through 5. Considering the ruling of the Court, the question of the validity of claims 3 through 5 is now moot.

Under Rule 57 of the Federal Rules of Civil Procedure declaratory judgment actions are triable by a jury. The jury was duly instructed as to the law to be applied to the facts in regard to the validity and infringement of the McGill patent. The jury's verdict of infringement, contributory infringement and inducing of infringement of claim 2 by the Defendant dictates that the Court should enter judgment against the Defendant on that portion of its counter-claim requesting a declaration of non-infringement of claim 2.

The ultimate test of patent validity is one of the law. *Great A & P Tea Co. v. Supermarket Corp.*, 340 U.S. 147, 71 S.Ct. 127 (1950). "It has long been clear that the Constitution requires that there be some 'invention' to be entitled to patent protection". *Sakraida v. Agpro, Inc.*, 425 U.S. 273, 96 S.Ct. 1532, 1536. A determination of "invention" has historically involved a comparison of the subject matter of the patent with the skill of the calling. *Graham v. John Deere*, 383 U.S. 1, 86 S.Ct. 684 (1966). A valid patent must possess novelty and utility, 35 U.S.C. §§ 101 and 102, and non-obviousness, 35 U.S.C. § 103. "Obviousness" is a legal conclusion based upon factual evidence. The Supreme Court in *Graham v. John Deere*, supra, sets out the basic factual inquiries to be made in the determination of obviousness.

> Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved.

The Court submitted this case to the jury requesting a general verdict with special interrogatories. In its general instructions to the jury the Court set forth the three factual inquiries which they were required to make in their determination of obviousness. To aid in the determination of the general verdict, the Court submitted to the jury several special interrogatories addressing all material issues in regard to patent validity. Consistent with its general verdict, the jury indicated in response to special interrogatory number 4 that the Defendant had not proven by the required degree of proof that the process covered by the McGill patent was obvious. The jury answered the following question in the negative.

> Keeping in mind the Court's instructions as to the required factual inquiries to determine "obviousness", do you find that the Defendant has proved, by the required degree of proof that the McGill patent is not valid because the differences between the process covered by the McGill patent and the prior art are such that they would have been obvious to a person of ordinary skill in the art at the time James McGill and William Scott made their invention.

The Court after considering the record before it and in view of the facts presented concurs with the finding of the jury that the differences between the process covered by the McGill patent and the prior art are not such that would have been obvious to a person of ordinary skill in the art at the time James McGill and William Scott made their invention. It is therefore the ruling of this Court that the process covered by claim 2 of the McGill patent meets the obviousness test. It is further the ruling of this Court that claim 2 of the McGill patent, having met the test for validity, is valid.

Plaintiff requested in its original and supplemental complaints that the Court grant a permanent injunction against the infringement contributory infringement and inducing of infringement of its patent by the Defendant. The Plaintiff asserts that, in view of the Defendant's status as a competitor of the Plaintiff, and in view of evidence that the Defendant had continued to sell equipment adapted to infringe the Plaintiff's patent until the time of trial and that the Defendant had continued to operate its demonstration unit in Tulsa that the Defendant will continue to cause competitive injury to the Plaintiff and should be enjoined from such activities in the future.

The jury after due deliberation found that the Defendant had infringed claim 2 of the McGill patent, the

Defendant had induced the infringement of claim 2 by its customers, and had contributed to infringement by its customers.

The Court finds that the Plaintiff McGill is entitled to an injunction under Title 35, U.S.C.A. § 283 against the Defendant Zink enjoining further infringement of claim 2 of the McGill patent and enjoining contributory infringement and the inducing of infringement of claim 2 of the McGill patent, letters patent no. 4,066,423.

Increase damages and attorneys' fees: Title 35 U.S.C. § 284 permits the Court to award damages up to three times the amount found adequate by the jury to compensate the Plaintiff for the infringement.

35 U.S.C. § 285 allows the Court to award reasonable attorney's fees to the prevailing party in an exceptional case. Both these sections have been used to compensate the prevailing party for the inequitable conduct of his opponent and thus are applicable only in unusual cases. *Deere & Co., v. International Harvester Co.*, 658 F.2d 1137 (7th Cir. 1981).

Section 284, allowing the Court to award treble damages, has been interpreted by the Courts to apply only in cases of bad faith where conscious and willful infringement are found. *Lam, Inc. v. Johns-Manville Corp.*, 668 F.2d 462 (10th Cir. 1982); *Milgo Electric Corp. v. United Business Communications, Inc.*, 623 F.2d 645 (10th Cir. 1980); *Deere & Co.*, supra. "Thus, in cases where the issues are close and fairly debatable and are litigated in good faith, treble damages should not be awarded." *Deere & Co.*, supra at 1146. "An infringer who reasonably doubt-

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ed that the patent was invalid has not willfully infringed the patent." *Lam, Inc.*, supra at page 474.

The jury, in response to interrogatory no. 16, found that Zink's infringement was willful. Since the award of increased damages and attorney's fees is within the discretion of the Court, such a finding by the jury is purely advisory and does not compel the Court to award either attorney's fees or damages. See *White v. Marbel, Inc.*, 369 F.Supp. 1321 (M.D. Fla., 1973), modified in other respects, 509 F.2d 287 (5th Cir. 1975).

The Court declines to accept the advisory finding of the jury on the issue of willful infringement. The Court finds from a preponderance of the evidence that the requisite finding of bad faith could not be found to support a finding of willful infringement. The Court cannot find under the standards and authorities set forth above that the conduct of the Defendant before or during the litigation was such as to rise to the level of bad faith required by the Courts in the award of treble damages.

Attorney's fees are awarded "to compensate the prevailing party because the losing party's misconduct was so unfair and reckless as to make it unconscionable for the prevailing party to sustain the expense of counsel." *Lam, Inc.*, supra at page 476; *Q-Panel Co. v. Newfield*, 432 F.2d 210, 211 (10th Cir. 1973). The Tenth Circuit recognizes as basis for awards of attorney's fees either willful infringement or the assertion of "sham or frivolous defenses that increase significantly the patent holder's legal expenses through unduly protracted litigation." Id. The Court finds that neither have been shown by the evidence in this case. Therefore, Plaintiff's motion for in-

creased damages and for the award of attorney's fees will be denied.

Pre-judgment interest: Plaintiff has requested that the Court award pre-judgment interest under 35 U.S.C. § 284. Section 284 gives the Court general authority to award interest and costs. The Supreme Court has set standards for the award of pre-judgment interest under § 284 in *General Motors Corp. v. Devex Corp., et al.*, — U.S. — (1983) (reported in supplement to Vol. 217, no. 8, U.S.P.Q. Weekly Advance Sheets, May 23, 1983). The Court states that "the underlying purpose of the provision strongly suggests that pre-judgment interest should ordinarily be awarded where necessary to afford the Plaintiff full compensation for the infringement." The Court stated that in the typical case an award of pre-judgment interest is necessary to "insure that the patent owner is placed in as good a position as he would have been in had the infringer entered into a reasonable royalty agreement." Id. The policy behind the award is clearly to insure that Plaintiff is adequately compensated for the infringement. Although the Court held that pre-judgment interest should ordinarily be awarded absent any justification for withholding such award, it allowed that there may be appropriate circumstances under which pre-judgment interest would not be awarded. It is the opinion of the Court that this is such a case. Plaintiff was not awarded damages in the amount equal to a "reasonable royalty" for the use of its patent, but was awarded adequate compensatory damages by the jury based upon evidence submitted of lost profits. The damages awarded, while not excessive, are sufficient to "adequately compensate" the Plaintiff for the infringement of its patent. The Court

believes that this is a circumstance in which the Plaintiff would not need the award of pre-judgment interest up to a level such that the total award would amount to an adequate compensation for infringement. Therefore, the Court denies Plaintiff's motion for pre-judgment interest.

DEFENDANT'S APPLICATION FOR ATTORNEY'S FEES

The Court finds and orders this is not the type of exceptional case as set forth in *True Temper Corp. v. C.F. & I. Steel Corp.*, 601 F.2d 495 (10th Cir. 1979) requiring the award of attorney's fees to the Defendant due to the bad faith of the Plaintiff in bringing suit for infringement of claims 3 through 5. The Court therefore denies the Defendant's motion for attorney fees based upon alleged fraud committed by the Plaintiff on this Court and on the Patent and Trademark Office.

MOTION OF THE PLAINTIFF FOR ADDITIONAL FINDINGS OF FACT AND CONCLUSIONS OF LAW

Plaintiff moves the Court for additional Findings of Fact and Conclusions of Law in regard to several issues of law listed in the pre-trial order. The Court has previously addressed the questions of obviousness, patent validity, injunctive relief, increased damages, attorney's fees and pre-judgment interest. The Court submitted to the jury the question of whether or not the Defendant had proved whether the patentees, James McGill and William Scott, themselves invented the subject matter of the patent. The Court declines to disturb the finding of the jury that the defense was not proven. The Court also submitted to

the jury the question of whether or not the McGill patent was unenforceable because of a failure of James McGill and William Scott to cite to the patent office prior art which was more pertinent to their patent application than prior art which they cited. The jury found that there was no such fraud on the patent office, and the Court declines to disturb the finding of the jury.

The Defendant listed as a question of law in the pretrial order whether the Plaintiff was guilty of fraud on this Court by filing this litigation and continuing to prosecute it with admitted full knowledge of the prior public use of the Mark IV gasoline vapor recovery unit at Port Arthur, Texas. As previously set forth above, after a review of all the evidence, the Court does not find sufficient evidence to show that this case was brought with anything but a good faith belief in the validity of the patent in suit. The Court finds that there was no such bad faith as to constitute a fraud on the Court.

IT IS THEREFORE THE ORDER OF THIS COURT that Defendant's motion under Rule 50(b) for a judgment notwithstanding the verdict or in the alternative for a new trial be and hereby is denied.

IT IS FURTHER ORDERED that the Plaintiff's motion for increased damages be and hereby is denied.

IT IS FURTHER ORDERED that Plaintiff's motion for assessment of attorney's fees be and hereby is denied.

IT IS FURTHER ORDERED that Plaintiff's motion for assessment of pre-judgment interest be and hereby is denied.

IT IS FURTHER ORDERED that Defendant's application for assessment of attorney's fees be and hereby is denied.

IT IS FURTHER ORDERED that Plaintiff's Application for Hearing on Post-Trial Issues be, and hereby is, denied.

IT IS FURTHER ORDERED that the conclusions of law required of the Court are as set forth above.

IT IS FURTHER ORDERED that Defendant Zink be enjoined from further infringement of claim 2 of the McGill Patent, letters patent no. 4,066,423. Defendant is further enjoined from inducing infringement and contributing to infringement by its customers, of claim 2 of letters patent no. 4,066,423.

ORDERED this 22nd day of June, 1983.

/s/ James O. Ellison
United States District Court

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

No. 83-1198
80-C-17-E

McGILL INCORPORATED,

Appellee,

v

JOHN ZINK COMPANY,

Appellant.

No. 83-1217
80-C-17-E

McGILL INCORPORATED,

Cross-Appellant,

v.

JOHN ZINK COMPANY,

Cross-Appellee.

JUDGMENT

ON APPEAL from the US District Court for the Northern District of Oklahoma

This CAUSE having been heard and considered, it is ORDERED and ADJUDGED: AFFIRMED IN PART AND REVERSED IN PART.

Entered By Order Of The Court

George E. Hutchinson, Clerk
/s/ George E. Hutchinson, Clerk

DATED April 27, 1984

Appellee's Petition for
Rehearing and Suggestion for
Rehearing In Banc, filed
May 9, 1984.
Petition for Rehearing,
Denied, June 4, 1984,
Suggestion for Rehearing,
In Banc, Declined,
July 16, 1984.

ISSUED AS A MANDATE: July 24, 1984

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

Appeal No. 83-1198

McGILL INCORPORATED,

Appellee,

v.

JOHN ZINK COMPANY,

Appellant.

Appeal No. 83-1217

McGILL INCORPORATED,

Cross-Appellant,

v.

JOHN ZINK COMPANY,

Cross-Appellee.

Before KASHIWA, *Circuit Judge,* COWEN, Senior *Circuit Judge,* and BENNETT, *Circuit Judge.*

ORDER

Appellee/Cross-Appellant, McGill Inc., filed a petition for panel rehearing on May 9, 1984. After careful consideration of its contentions, we hereby grant the petition for the limited purpose of modifying our published opinion dated April 27, 1984.

Discussion

To clarify our decision in the published opinion, we make the following amendment to that opinion:

page 9, line 4 from bottom, change "713 F.2d 746, 757" to "718 F.2d 365, 376"

page 13, footnote 5, line 3, change "ambiguous" to "disputed"

p. 16, line 9, add "Thus, the specification discloses a process in which the absorbent is created internally within the system and not a process that utilizes an external liquid as its absorbent.

p. 16, line 16, after "of", add "internally-created,"

p. 16, line 21, after "is", add "internally-created,"

p. 17, line 15, after "than", add "internally-created,"

p. 17, line 2 from bottom, after second "the", add 'internally-created,"

p. 19, after line 18, insert paragraph:

> "In regard to possible infringement under the doctrine of equivalents, we are similarly convinced that there is no set of facts, consistent with McGill's interpretation, that is supported by substantial evidence. As discussed above, there is no substantial evidence to support McGill's interpretation that its process uses an absorbent that is not the internally-created, recovered liquid hydrocarbon. In light of the fact that Zink's process utilizes an absorbent that is comprised of an external fluid, McGill's and Zink's processes are not equivalents in that different *ways* are used to perform the desired function. *Graver Tank & Manufacturing Co. v. Linde Air Products Co.*, 339 U.S. 605, 608-9 (1950); *Carman Industries, Inc. v. Wahl*, 724 F.2d 932, 942, 220 USPQ 481, 488-89 (Fed. Cir. 1983). Thus, any finding regarding equivalence is not supported by substantial evidence."

p. 19, line 20, after "of", add "internally-created,"

FOR THE COURT

/s/ Shiro Kashiwa
Circuit Judge

Date: June 4, 1984

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

June 5, 1984

ERRATUM

Appeal Nos. 83-1198/83-1217

McGill Incorporated v. John Zink Company

This erratum is amending the order dated June 4, 1984. Please make the following correction:

The inserted paragraph at page 19, line 10:

Change "comprised" to —composed—.

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

717 Madison Place, N.W.
Washington, D.C. 20439

June 15, 1984

George E. Hutchinson
Clerk

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73114

RE: McGill Incorporated v. John Zink Company
Appeal Nos. 83-1198 and 83-1217

Dear Sirs:

The Court has considered the suggestion for rehearing in banc by the appellee and has today accepted that suggestion.

It is not anticipated, at this time, that further briefing or oral argument will be required. However, should the Court decide otherwise, you will be promptly advised.

Very truly yours,

/s/ George E. Hutchinson

cc: Neil M. Rose, Esq.
James D. Morton, Esq.

GEH:bam

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

No. 83-1198
83-1217

McGILL INCORPORATED,

Appellee,

v.

JOHN ZINK COMPANY,

Appellant.

ORDER

A suggestion for rehearing in banc having been filed in this case,

UPON CONSIDERATION THEREOF, it is Ordered by the court that the suggestion for rehearing in banc be, and the same is hereby, Declined.

FOR THE COURT

/s/ George E. Hutchinson, Clerk

Date: July 16, 1984

cc: Walther E. Wyss
Jerry J. Dunlap

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

No. 83-1198
83-1217

McGILL INCORPORATED,

Appellee/Cross-Appellant,

v.

JOHN ZINK COMPANY,

Appellant/Cross-Appellee.

ORDER

A motion to recall the mandate and a *second* suggestion for rehearing in banc having been filed in this case,

UPON CONSIDERATION THEREOF, it is Ordered by the Court that the motion to recall the mandate is Denied and the second suggestion for rehearing in banc be, and the same is hereby, Declined.

FOR THE COURT

/s/ George E. Hutchinson, Clerk

September 6, 1984

cc: Walther E. Wyss
Jerry J. Dunlap